

| | | |
|--------------------|--|------|
| | 91 | 150 |
| P-PvArc4-417775-FL | ATTGTTT....CACCTACAA TGATAATATA TTAAAAAAGTG AACTTTAAAT | |
| P-PvArc3-417683-FL | ATTGTTT....CACCTACAA TGATAATATA TTAAAAAAGTG AACTTTAAAT | |
| P-Pv-Arc5-FL | ATTTTTTCA CATAACAATTA TGATAATATA TTAAAAAAGTG AACTTTAAAT | |
| | 391 | 440 |
| P-PvArc4-417775-FL | TAATTTACA.AGTTAAATT AATTCAAGCTT GTCTCCTTGA | |
| P-PvArc3-417683-FL | TAATTTACA.AGTTAAATT AATTCAAGCTT GTCTCCTTGA | |
| P-Pv-Arc5-FL | TAATTTACAA TATATAGATT CAGTTAAATC AATTCAAGCTT GTCTCCTTGA | |
| | 801 | 850 |
| P-PvArc4-417775-FL | TGTTTATGCT CTTTCGGAA TTAATTAAGT TTTAGTTGTA ATTGTAATAA | |
| P-PvArc3-417683-FL | TGTTTATGCT CTTTCGGAA TTAATTAAGT TTTAGTTGTA ATTGTAATAA | |
| P-Pv-Arc5-FL | TGTTT....CTGTAATAA | |
| | 901 | 950 |
| P-PvArc4-417775-FL | TTAGTCACGA GTGTGTATCC TCACCCCTCA CAAACAAACAT TTCAAGAAAA | |
| P-PvArc3-417683-FL | TTAGTCACGA GTGTGTATCC TCACCCCTCA CAAACAAACAT TTCAAGAAAA | |
| P-Pv-Arc5-FL | CTAGTCATGA G....CACCACCTCA GAGACAAGAT TTCAAGAAAA | |
| | 1351 | 1400 |
| P-PvArc4-417775-FL | ATA.....AAATT TTATAAAAAG GGAAAATCAA ATTAGAATT | |
| P-PvArc3-417683-FL | ATA.....AAATT TTATAAAAAG GGAAAATCAA ATTAGAATT | |
| P-Pv-Arc5-FL | ATATATAATA TATACAATTA AATAAAAAAG GGAAAATCAA ATTAGAATT | |
| | 1751 | 1800 |
| P-PvArc4-417775-FL | CGTTGTTTGT TAATTGTTAA TTTTATATTA TTATTTCTCC CTCAAATAAT | |
| P-PvArc3-417683-FL | CGTTGTTTGT TAATTGTTAA TTTTATATTA TTATTTCTCC CTCAAATAAT | |
| P-Pv-Arc5-FL | CGTTGTTAA TAATTGTTAA TTTGGAGTT.GAATAAT | |
| | 1801 | 1850 |
| P-PvArc4-417775-FL | ATTATAAAAAG ATAATGATTGATT.GATT TTGCATTTGT TGTTGTATAA | |
| P-PvArc3-417683-FL | ATTATAAAAAG ATAATGATTGATT GATTTTGATT TTGCATTTGT TGTTGTATAA | |
| P-Pv-Arc5-FL | AAAATGAAAG AAAAAAGTTG GA..AAGATT TTGCATTTGT TGTTGTATAA | |
| P-PvArc4-417775-FL | (SEQ ID NO: 10) | |
| P-PvArc3-417683-FL | (SEQ ID NO: 9) | |
| P-Pv-Arc5-FL | (SEQ ID NO: 11) | |

Figure 1

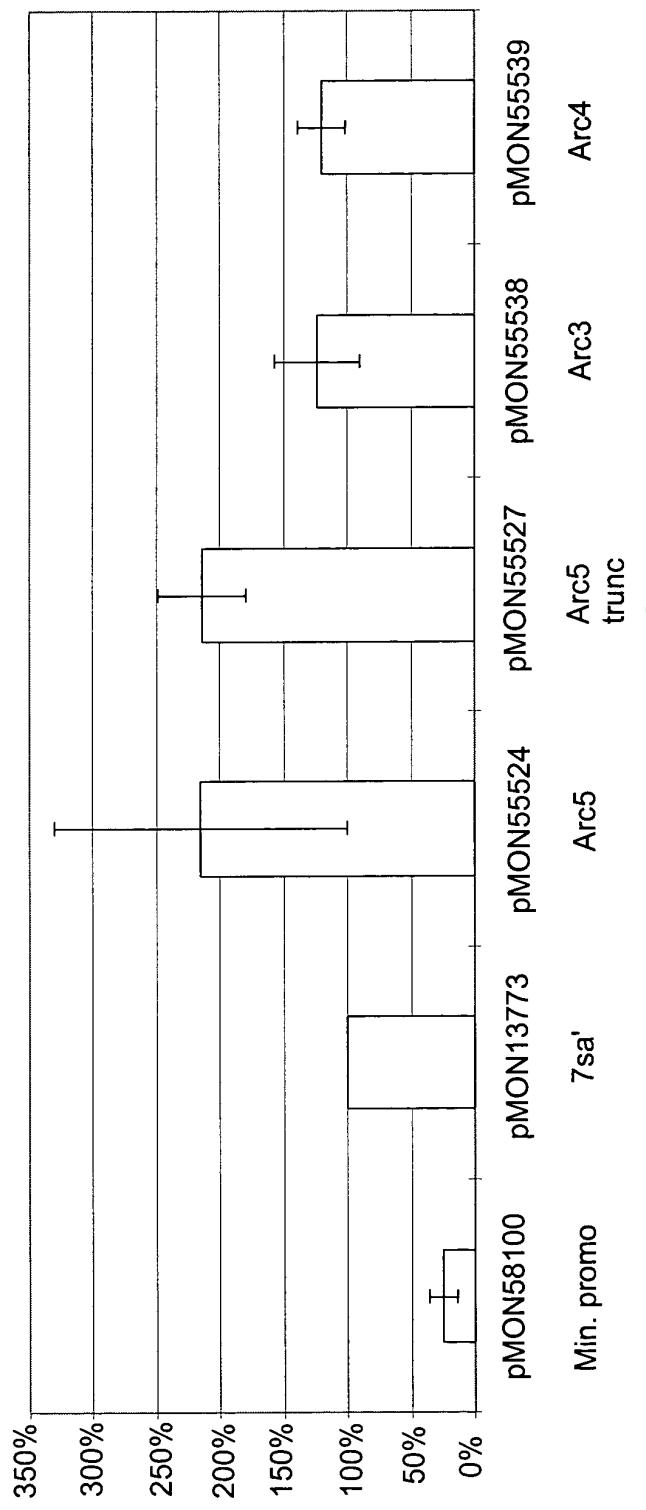


Figure 2

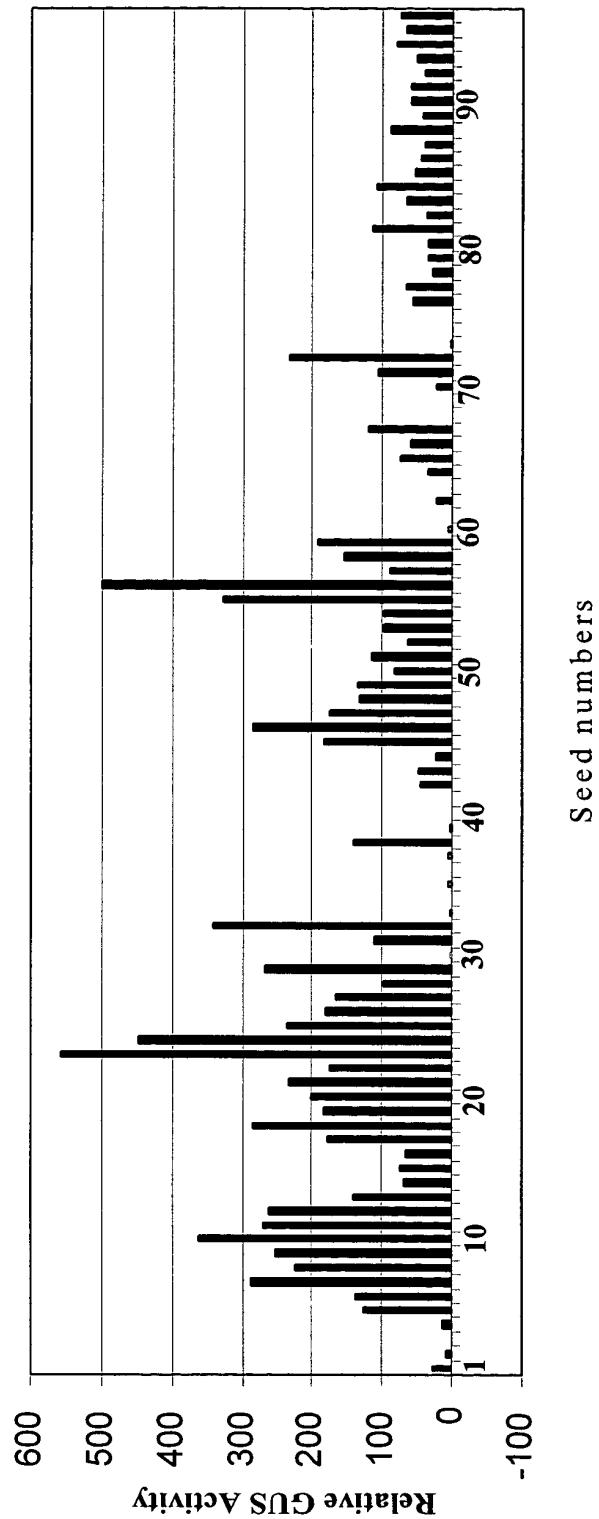


Figure 3

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!!NA_MULTIPLE_ALIGNMENT 1.0
PileUp of: @/usr4/people/ppdubo/.seqlab-mendel/pileup_1.list

Symbol comparison table: GenRunData:pileupdna.cmp  CompCheck: 6876

pileup_1.msf  MSF: 1903  Type: N  July 12, 2000 09:15  Check: 8196 ..

Name: P-PvArc4-417775-FL  Len: 1903  Check: 2130  Weight: 1.00
Name: P-PvArc3-417683-FL  Len: 1903  Check: 8855  Weight: 1.00
Name: P-Pv-Arc5-FL          Len: 1903  Check: 7211  Weight: 1.00

          1                                     50
P-PvArc4-417775-FL  CTGCAGTCCT ACATAATTCT TCTACCGTTA ACCGTCAAAT CATATTTCA
P-PvArc3-417683-FL  CTGCAGTCCT ACATAATTCT TCTACCGTTA ACCGTCAAAT CATATTTCA
P-Pv-Arc5-FL          CTGCAGTCCT ACATAATTCT TCTACAGTTA ACCTTCAAAT CATATTTCA

          51                                     100
P-PvArc4-417775-FL  TTATTCACAA ATATCTAGTG TCTCATACGA ATAAATATAT ATTGTTT...
P-PvArc3-417683-FL  TTATTCACAA ATATCTAGTA TCTCATACGA ATAAATATAT ATTGTTT...
P-Pv-Arc5-FL          TTATTCACAA ATATCTAGTC ATTCATACGA ATAAATATAT ATTTTTTCA

          101                                    150
P-PvArc4-417775-FL  .CACCTACAA TGATAATATA TTAAAAAAGTG AACCTTAAAT GTAATTAAAT
P-PvArc3-417683-FL  .CACCTACAA TGATAATATA TTAAAAAAGTG AACCTTAAAT GTAATTAAAT
P-Pv-Arc5-FL          CATAACAATT TGATAATATA TTAAAAAAGTG AACCTTAAAT TTAATTAAAT

          151                                    200
P-PvArc4-417775-FL  CTCATAAAAT CGACTTATAA AATGAGAGTT ATACCTACGA TCGATAAAAAA
P-PvArc3-417683-FL  CTCATAAAAT CGACTTATAA AATGAGAGTT ATACCTACGA TCGATAAAAAA
P-Pv-Arc5-FL          CTTATAAAAT CAACTTATAA AATGAGAGTT CTACCTACGA TTAATAAAAAA

          201                                    250
P-PvArc4-417775-FL  TAACTTTAAT ATCATATTAA GAAATAAAACT TTAAACCTAA CTCAATTAA
P-PvArc3-417683-FL  TAACTTTAAT ATCATATTAA GAAATAAAACT TTAAACCTAA CTCAATTAA
P-Pv-Arc5-FL          TAACTTGAT ATCATATTAA AAAATAAAACT TTAAACCTAA CTCAACTAA

          251                                    300
P-PvArc4-417775-FL  TAAAACCAAT TTATAAAATA AAATTTACAC TCACTTATAT ATTATAAAAT
P-PvArc3-417683-FL  TAAAACCAAT TTATAAAATA AAATTTACAC TCACTTATAT ATTATAAAAT
P-Pv-Arc5-FL          TAAAACCAAT TTATAAAATA AAATTTACAC TCAGTTATGA ATTATAAAAT

          301                                    350
P-PvArc4-417775-FL  AAAATAGTTT TTAGGTGACG TGAAATCTCC ATCCGATTAA TCAATATTAA
P-PvArc3-417683-FL  AAAATAGTTT TTAGGTGACG TGAAATCTCC ATCCGATTAA TCAATATTAA
P-Pv-Arc5-FL          GAAATAGTTT TTAGGTGACG TGGAATCTCC ATCCGATTAA TCAATATTG

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Figure 4a

| | | |
|--------------------|------------|--|
| | 351 | 400 |
| P-PvArc4-417775-FL | CTGATGTTAT | TGTTATTATA GAAACTAAAA ACATGCCAAA TAATTTACA. |
| P-PvArc3-417683-FL | CTGATGTTAT | TGTTATTATA GAAACTAAAA ACATGCCAAA TAATTTACA. |
| P-Pv-Arc5-FL | ATGATGTTAT | TGTTATTATA GAAACTAAAA ACATGCCAAA TAATTTACAA |
| | 401 | 450 |
| P-PvArc4-417775-FL | | .AGTTAAATT AATTCA GCTT GTCTCCTTGA CTAATAAAAC |
| P-PvArc3-417683-FL | | .AGTTAAATT AATTCA GCTT GTCTCCTTGA CTAATAAAAC |
| P-Pv-Arc5-FL | TATATAGATT | CAGTTAAATC AATTCA GCTT GTCTCCTTGA CTAATAAAA |
| | 451 | 500 |
| P-PvArc4-417775-FL | ACAACTTAG | ACTATTATTC AGATTTACAC TTCATCTCTC ATGATATCCC |
| P-PvArc3-417683-FL | ACAACTTAG | ACTATTATTC AGATTTACAC TTCATCTCTC ATGATATCCC |
| P-Pv-Arc5-FL | AAAACTTAG | ACTATTATTC AGATTTACAC TTCATCTCTC ATGATATCCC |
| | 501 | 550 |
| P-PvArc4-417775-FL | TCAAAGTGAA | TTTCATTCA GGCACCATT ATATAATCAA CAATTTAAA |
| P-PvArc3-417683-FL | TCAAAGTGAA | TTTCATTCA GGCACCATT ATATAATCAA CAATTTAAA |
| P-Pv-Arc5-FL | TCAAAGTGAA | TTTCATTCA GGCACCATT ATATAATCAA CAATTTAAA |
| | 551 | 600 |
| P-PvArc4-417775-FL | AAGATGCAA | TTTGACTAG TAAATGCTTC AATGTCCTG ATAAACACAC |
| P-PvArc3-417683-FL | AAGATGCAA | TTTGACTAG TAAATGCTTC AATGTCCTG ATAAACACAC |
| P-Pv-Arc5-FL | AATATGCAA | TTTGACCA G TAAATGCTTT AATGTCCTG ATAAACACAA |
| | 601 | 650 |
| P-PvArc4-417775-FL | ACAAAAAAAC | CTTTCATAT TTTTTCTTA TTAAATAAAG AAATTCATTG |
| P-PvArc3-417683-FL | ACAAAAAAAC | CTTTCATAT TTTTTCTTA TTAAATAAAG AAATTCATTG |
| P-Pv-Arc5-FL | AAAAAAA. | .AATTCATAT TTTTTCTTA TTAAATAAAG AAGTTCAT |
| | 651 | 700 |
| P-PvArc4-417775-FL | TAAGAGAAAT | TAGGATCCTT CAATAGAAAA TGTGTTATTT CCTCATCACC |
| P-PvArc3-417683-FL | TAAGAGAAAT | TAGGATCCTT CAATAGAAAA TGTGTTATTT CCTCATCACC |
| P-Pv-Arc5-FL | TAAGAGAAAT | TAGGATCCTT CAATAGAAAA TGTGTTATTT CCTCATCACC |
| | 701 | 750 |
| P-PvArc4-417775-FL | AGGAAAAAAA | GGACAACAGT TAACACAACA AATTTATGTT TCATTTGAGA |
| P-PvArc3-417683-FL | AGGAAAAAAA | GGACAACAGT TAACACAACA AATTTATGTT TCATTTGAGA |
| P-Pv-Arc5-FL | AG..ACAAAG | GGCAACAGT TAACAAAACA AATTTATGTT TCATTTGAGA |
| | 751 | 800 |
| P-PvArc4-417775-FL | TTAAGGAAGG | TAAGGAAGAA AAAAGATTAA AAAAATGTC CTTATCTCTT |
| P-PvArc3-417683-FL | TTAAGGAAGG | TAAGGAAGAA AAAAGATTAA AAAAATGTC CTTATCTCTT |
| P-Pv-Arc5-FL | TTAAGGAAGG | TAAGGAAGAA AAAAGATTAA AAAAATGTC CTTATCTCTT |

Figure 4b

Figure 4c

| | | |
|--------------------|--|------|
| | 1251 | 1300 |
| P-PvArc4-417775-FL | CTCATATCCT CTCACACCGG TGAAATCATT TACTCGTAGT ATAGTACCGT | |
| P-PvArc3-417683-FL | CTCATATCCT CTCACACCGG TGAAATCATT TACTCGTAGT ATAGTACCGT | |
| P-Pv-Arc5-FL | TTCAGATCCT CTCACACCTG TGTGATCATT TAGTCAT.GT ATGTAGTACA | |
| | 1301 | 1350 |
| P-PvArc4-417775-FL | GTCATAATAG TTCACAACAC AGTAAAAAGA ATAAGAATAA ACTAGTGAAT | |
| P-PvArc3-417683-FL | GTCATAATAG TTCACAACAC AGTAAAAAGA ATAAGAATAA ACTAGTGAAT | |
| P-Pv-Arc5-FL | ATCATTGTAG TTCACAACAG AGTAAAATAA ATAAGGATAA ACTAGGGAAT | |
| | 1351 | 1400 |
| P-PvArc4-417775-FL | ATA..... AAATT TTATAAAAAG GGAAAATCAA ATTAGAATT | |
| P-PvArc3-417683-FL | ATA..... AAATT TTATAAAAAG GGAAAATCAA ATTAGAATT | |
| P-Pv-Arc5-FL | ATATATAATA TATACAATTA AATAAAAAAG GGAAAATCAA ATTAGAATT | |
| | 1401 | 1450 |
| P-PvArc4-417775-FL | TTGATTCCCC ACATAACACA ACTCACCAGT CACGCTGCC CCTCAGCTC | |
| P-PvArc3-417683-FL | TTGATTCCCC ACATAACACA ACTCACCAGT CACGCTGCC CCTCAGCTC | |
| P-Pv-Arc5-FL | TTGATTCCCC ACATGACACA ACTCACCAGT CACGCTGCC CCTCAGCTC | |
| | 1451 | 1500 |
| P-PvArc4-417775-FL | CTCCTCTCCA CACATGTCTC ATGTCACTTT CGACTTTGGC TTTTTCACTA | |
| P-PvArc3-417683-FL | CTCCTCTCCA CACATGTCTC ATGTCACTTT CGACTTTGGC TTTTTCACTA | |
| P-Pv-Arc5-FL | CTCCTCTCCA CACATGTCTC ATGTCACTTT CGACTTTGGC TTTTTCACTA | |
| | 1501 | 1550 |
| P-PvArc4-417775-FL | GGAGACAACT CGCCATGCAC GCTGCCACGT CAGCTCCTTC CTCTTCCCAT | |
| P-PvArc3-417683-FL | GGAGACAACT CGCCATGCAC GCTGCCACGT CAGCTCCTTC CTCTTCCCAT | |
| P-Pv-Arc5-FL | TGACACAACT CGCCATGCAT GTGCCACGT GAGCTCCTTC CTCTTCCCAT | |
| | 1551 | 1600 |
| P-PvArc4-417775-FL | GATGACACCA CTGGGCATGC ATGATGCCAC CTCAGCTCCC ACCTCTTCTC | |
| P-PvArc3-417683-FL | GATGACACCA CTGGGCATGC ATGATGCCAC CTCAGCTCCC ACCTCTTCTC | |
| P-Pv-Arc5-FL | GATGACACCA CTGGGCATGC ATGCTGCCAC CTCAGCTCCC ACCTCTTCTC | |
| | 1601 | 1650 |
| P-PvArc4-417775-FL | ATTATGAGCC TACTGCCAT GCACACTGCC ACCTCAGCAC TCCTCTCACT | |
| P-PvArc3-417683-FL | ATTATGAGCC TACTGCCAT GCACACTGCC ACCTCAGCAC TCCTCTCACT | |
| P-Pv-Arc5-FL | ATTATGAGCC TACTGCCAT GCACACTGCC ACCTCAGCAC TCCTCTCACT | |
| | 1651 | 1700 |
| P-PvArc4-417775-FL | TCCCATTGCT ACCTGCCAAA CCGCTTCTCT CTATAAATAT CTCTTTAAAT | |
| P-PvArc3-417683-FL | TCCCATTGCT ACCTGCCAAA CCGCTTCTCT CTATAAATAT CTCTTTAAAT | |
| P-Pv-Arc5-FL | TCCCATTGCT ACCTGCCAAA CCGCTTCTCT CCATAAATAT CTATTTAAAT | |

Figure 4d

Figure 4e

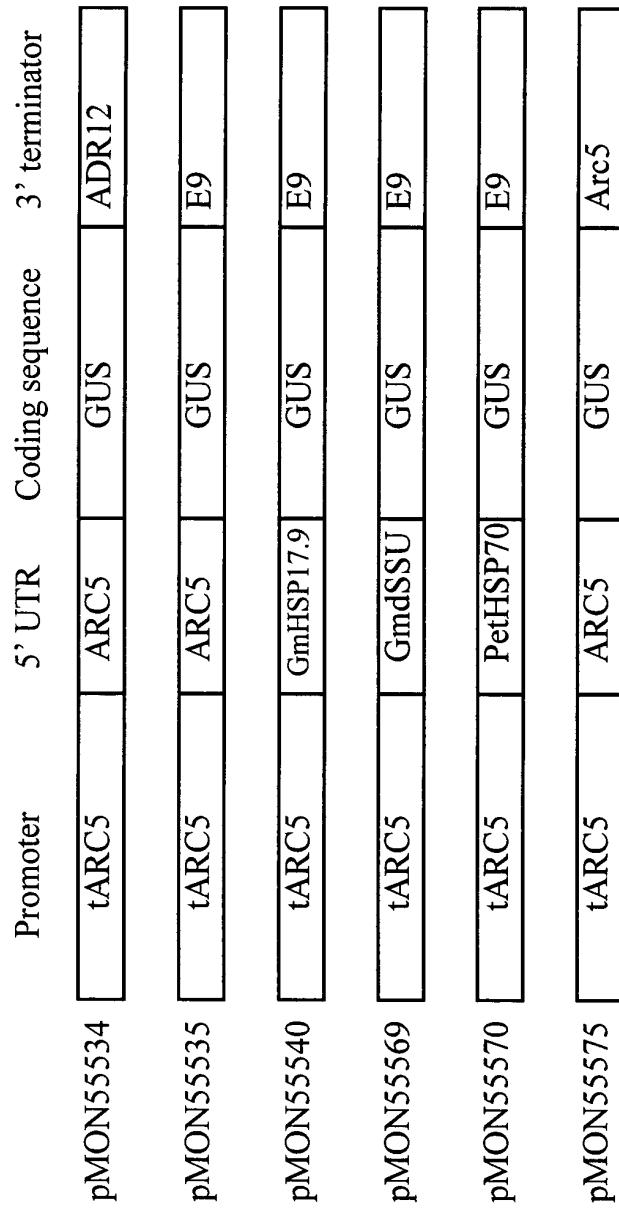


Figure 5

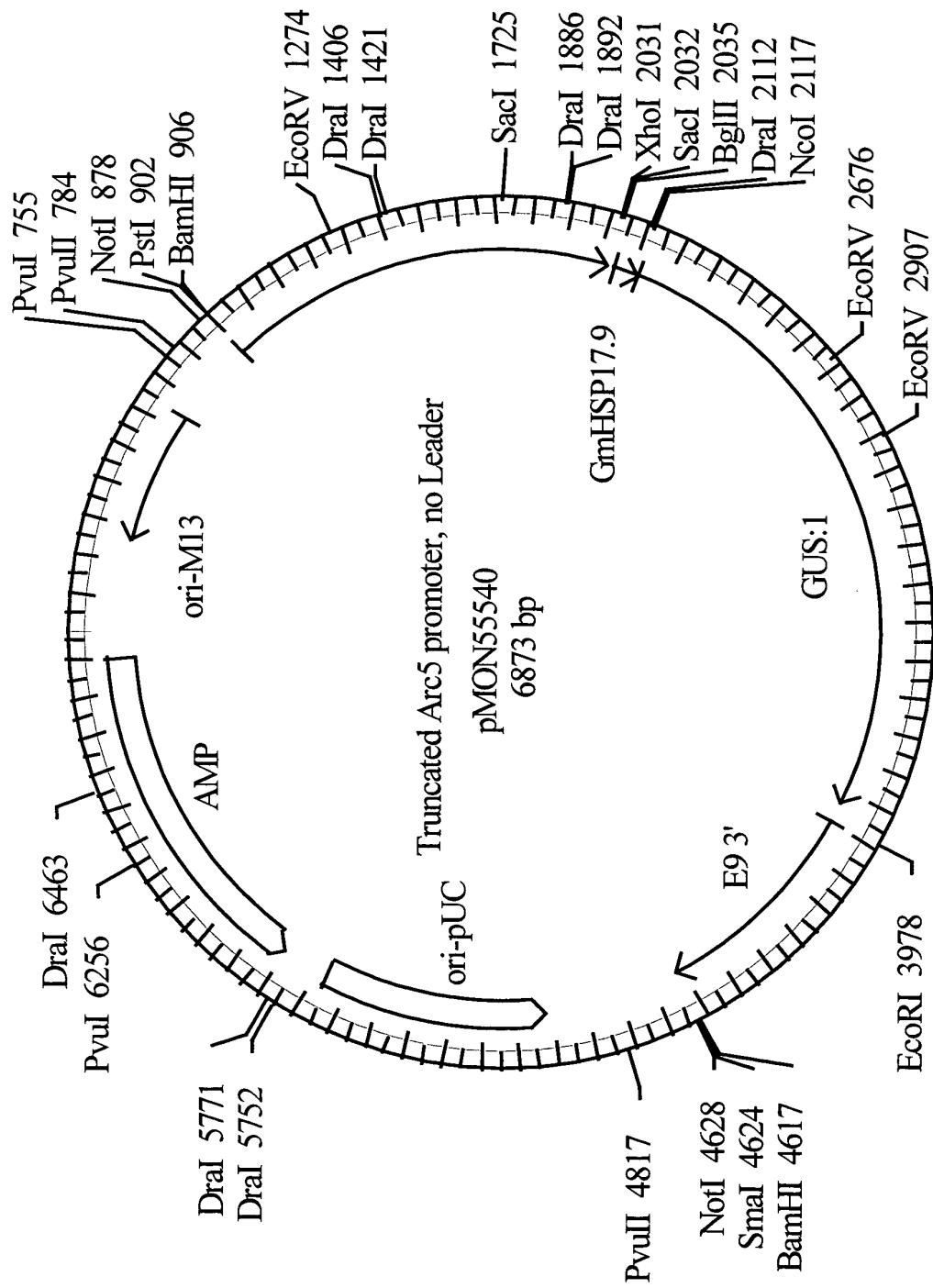


Figure 6

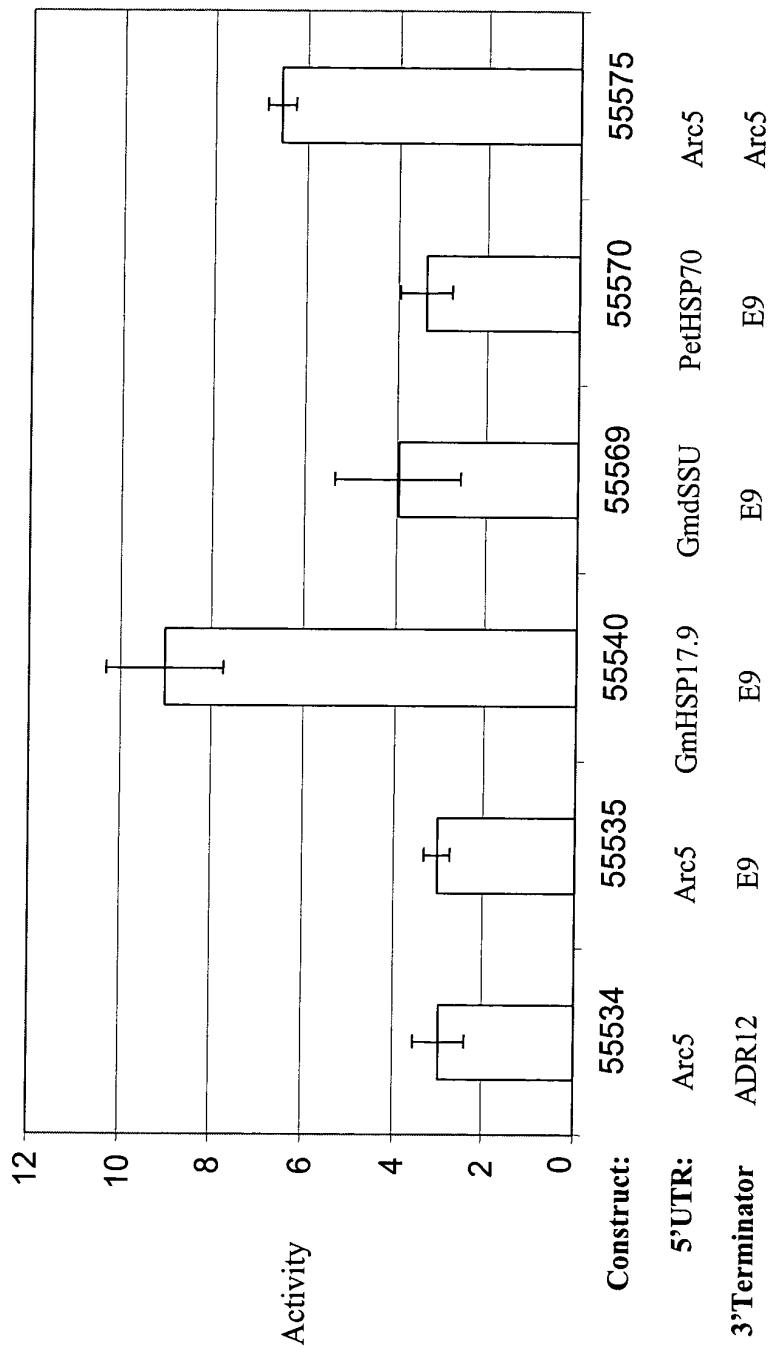


Figure 7